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Reconciling top-down and bottom-up development policies

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Local and regional development policies have become increasingly popular in response to the territorial challenges generated by economic globalisation. The unprecedented pace of the spatial re-organisation of economic activity has questioned the capability of the pre-existing top-down policy paradigm to deal with these new challenges (Pike et al., 2006). 'Bottom-up' local and regional development policies have been called into action in order to fill-in this operational vacuum. By empowering local actors and making them directly responsible for the design of their own collective response to the new challenges, bottom-up policies have often been regarded as an effective alternative to traditional approaches to development. Policy-makers needed ready-available and easily-manageable tools to deal with the new global scenario and bottom-up policies seemed to be able to provide them with suitable answers. Bottom-up Local Economic Development (LED) policies have been adopted in developed and (to a lesser extent) developing countries with little questioning of their theoretical justifications/foundations and little understanding of the factors conditioning their success. In other words, the traditional top-down policy apparatus grounded in solid macro and micro economic theories has been complemented (or even replaced) by a new policy approach whose theoretical foundations remain, at best, implicit. LED policies have lacked a clear conceptual framework not only for the diagnosis of local conditions and for the identification of the most appropriate remedies, but also for the ex-post assessment of their impact. Academic research has tried to fill this conceptual void by looking at

existing experiences and singling out factors of success and failure in a systematic fashion. An inductive approach has hence dominated the analysis of bottom-up policies, constraining not only the 'generality' of any conclusion and policy lessons – the 'often-mindless groping for "best practice"' discussed by Markusen and Schrock (2006) – but also a priori jeopardising any synergies with top-down policies and their foundations grounded into 'general' deductive macro theories of development.

However, over the past few years, the literature on economic development policies has evolved in such a way that the distance between inductive and deductive perspectives has shrunk. On the one hand, the literature on local and regional development has developed sound 'meso-level' analytical tools which combine inductive and deductive perspectives on local and regional development dynamics. On the other, the macro-economic approach to development has made significant steps towards becoming more open to inductive reasoning and, hence, to the consideration of local specificities.

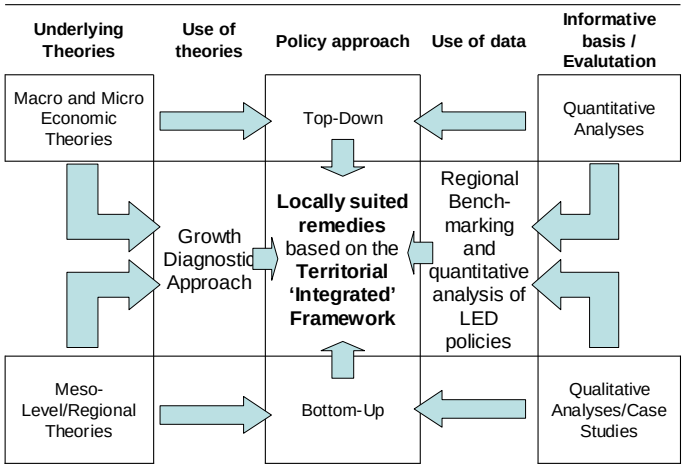
This commentary aims to show how the foundations of top-down and bottom-up development policies can be reconciled in a joint 'meso-level' conceptual framework which can serve simultaneously as a deductive justification for bottom-up local and regional development policies and as a coordination device between different policies.

Towards an 'integrated' framework for top-down and bottom-up policies

When looking at the literature that has inspired and guided local and regional economic development policies, the separation between macro and micro economic (deductive) theories, behind top-down development policies, and 'meso-local' (inductive) concepts, informing bottom-up development strategies, is immediately apparent.

Micro-economic analysis has shaped top-down micro-policy options aiming to influence the allocation of labour and capital, while macro-economic approaches have provided the rationale for top-down macro-policy options targeting aggregate regional income and expenditure. In accordance with the predictions of their underlying theories the aim of these policies 'is to induce capital and labour to locate in areas which would not normally have been chosen by those making the location decision' (Armstrong and Taylor 2000:234). Conversely, bottom-up policies have addressed "the naturally occurring sources of economic potential growing from within localities and regions" (Pike et al. 2006:155). They target the drivers of economic performance brought to light by meso-theories of innovation and growth by looking at 'territorial' and 'relational' assets including local institutions and networks (e.g. Regional Systems of Innovation), social capital, and localised tacit knowledge. As far as the empirical informative basis for the design (and evaluation) of these policies is concerned, top-down policies have been traditionally informed and evaluated by means of quantitative/econometric analyses, while bottom-up policies by means of (almost exclusively) qualitative case-study-based evidence. The upper and lower parts of Figure 1 show precisely this situation. Macro and micro economic literature provide the theoretical framework and quantitative analysis the informative input for top-down policies (upper part of Figure 1), while meso-level regional analysis and more qualitative studies constitute the basis for bottom-up approaches (lower part).

Figure 1 - Theoretical and informative basis of local and regional economic development policies



Source: Authors' elaboration

In theory top-down (macro and micro) and bottom-up development policies co-exist, interact with, and impact upon the same agents (individuals and firms) and territories, but so far have shown surprisingly limited synergies and osmosis. Our tenet is that this separation is the result of the lack of a common theoretical and conceptual ground. There is thus a need to cross-fertilise macro-, micro- and meso-level approaches to development by combining them in an 'integrated framework', which could become a powerful analytical tool for the understanding of 'real-world' innovation and growth dynamics. This 'integrated approach' could provide a common conceptual background for both top-down and bottom-up policies. By conceptualising both inter-regional external processes (in the form of spillovers) and internal indigenous factors – justified in light of either macro linear approaches (R&D efforts) or meso-level theories (Regional Systems of Innovation) – we are able to account for bottom-up policies as part of an interactive and interconnected geography of localities (giving rise to spillovers) and, at the same time, for top-down policies, rooted in heterogeneous territories (in terms of their indigenous characteristics). Such an integrated approach allows us to identify developmental factors as targets for both top

down and bottom-up regional development policies, offering a common ground for their coordination and synergic convergence. Quantitative results from regression analyses can thus be seen as stylised representations of the processes they address and the "regularities" they highlight, and while robust, they need to be complemented by an understanding of the residual (unexplained) heterogeneity of each individual case. As an example, the lessons of the innovation systems approach go precisely in this direction and lead us to consider the complexity of the relationship between innovation and growth, taking into account that the interaction among actors happens in "eminently contextualized conditions" (Cantwell and Iammarino 2003 p.11), as "untraded interdependencies" and informal knowledge flows (Storper, 1995).

Translating the territorial 'integrated' approach into a diagnostic/policy tool

Once we assume the need for an 'integrated' conceptual framework for both top-down and bottom-up policies, how can it be translated into practical policy prescriptions? Existing economic literature has extensively attempted to identify practical targets for development policies, 'translating' different theories into policy-guidance frameworks. In international macro-development literature, the 'growth diagnostics' (Hausmann, Rodrik and Velasco 2008; Rodrik 2010) approach develops a 'practical' framework for growth-enhancing policies by adopting a similar perspective to the integrated framework presented in this commentary. This approach is the result of the 'eclectic' cross-fertilisation of different theories of regional innovation and growth. 'Growth diagnostics is based on the idea that not all constraints [to economic growth and development] bind equally, and that a sensible and practical strategy consists of identifying the most serious constraint(s) at work (p.6) (…) and remove them with locally suited remedies. Diagnostics requires pragmatism and eclecticism, in the use of both theory and evidence. It has no room for dogmatism, imported blueprints, or empirical purism' (Rodrik 2010: 7). However, existing works based on the 'growth diagnostics' approach, even if attentive to local characteristics, are still grounded in macro theories of development, remaining silent about the

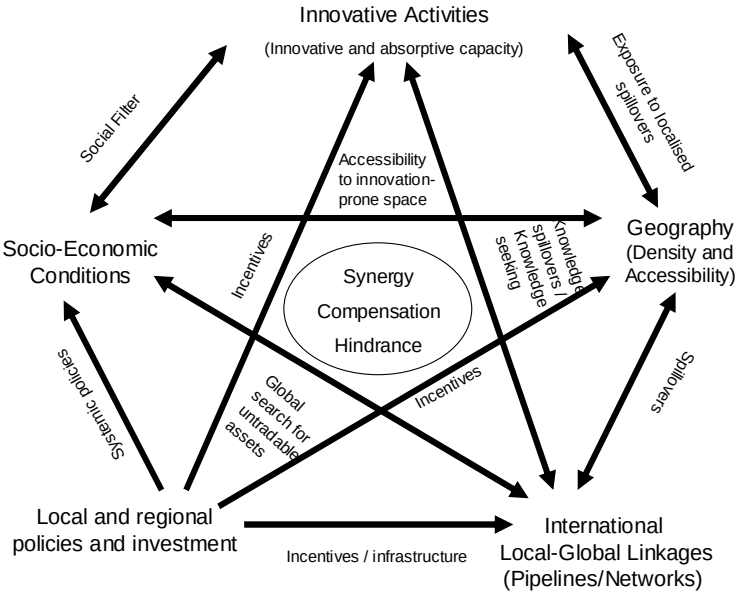
role of territorial assets. This makes them impractical for bottom-up policies. Conversely, in the planning and regional development literature a number of works have explicitly provided (both qualitative and quantitative) analytical support for bottom-up local development policies. Research on 'regional benchmarking' (Huggins 2009a and b) seeks "to understand regional contexts and promote improved regional innovation and competitiveness outcomes" (Huggins 2009a: 275) by comparing their performance, processes, and policies in a systematic fashion. These analyses have accumulated an impressive stock of knowledge on various aspects of regional economies which can support the diagnosis of local economic conditions making inter-regional comparisons possible (as with the integrated framework discussed in this paper). They also offer a definition of 'measurable' policy targets. However, the capability of these exercises to support policy-making is constrained by the lack of a sound underlying conceptual framework justifying a particular choice of indicators and accounting, not only for their qualitative differences and relative importance in different contexts, but also for their functional relationships. Other contributions have moved their focus from 'benchmarking' into the explicit search for the 'drivers' of 'regional competitiveness'. Kitson et al. (2004) critically review this literature spanning from Porter's competitive advantage diamond (and subsequent variations on the theme) to the progressively more sophisticated academic attempts by, for example, Budd and Hirmis (2004) or Wong (2002) and highlight the weaknesses which hamper their suitability to devise policy interventions. From a 'growth diagnostic' perspective, the lack of coherence in the theoretical justification of the various drivers of competitiveness – Kitson et al. (2004) suggest that 'different theories seem to be implicit in different drivers' (p. 996) – is not per se problematic. However, it becomes misleading 'whereby it is assumed that the same 'drivers' are equally important everywhere, and hence the same basic policy model is applicable' (p.996), as this contradicts the growth diagnostic logic and paves the way to imitation of best practices that overlook the '(often subtle) interdependencies that exist between the different factors contributing to a successful model' (Boschma 2004: 1011).

Translating the 'integrated framework' for regional and local innovation and growth discussed above into a conceptual toolkit for (bottom-up and top-down) development policies represents an attempt to show how filling this double gap in the literature is possible (central section of Figure 1). An 'integrated approach' can first bring the 'growth diagnostic approach' into regional and local policy-making by grounding the diagnosis in the literature focused on regional-territorial processes (central, left-hand side section of Figure 1). By cross-fertilising theories rather than simply linking-up indicators (as in most of the literature on regional competitiveness), clear, measurable, theoretically-grounded targets for local and regional policies can be identified. This implies grasping 'the logistics of the relationships between (these) different socioeconomic factors in the development process' (Wong 2002:1833) and producing a more accurate picture of the local economy for locally suited remedies (central, right-hand side section of Figure 1). The arrows in Figure 1 show the convergence of all these factors in an integrated framework: a regional 'growth diagnostics' approach allows us to use this framework as a tool for the identification of policy targets and locally-suited remedies while our theory-driven 'regional benchmarking' enables the collection of information simultaneously relevant for both top-down and bottom-up policies

A diagnostic policy tool for locally-suited economic development policies

How is this 'integrated approach' translated into policy? There are five keystones of regional and local economic development in the 'integrated' framework: innovative activities, socio-economic (social filter) conditions, geographical factors/accessibility, international (trans-local) linkages, and local and regional policies. They are presented in Figure 2. These factors can be seen as key regional assets/liabilities that benefit/hamper local firms and business, and hence are major aspects of regional competitive advantage/disadvantage (Kitson at al. 2004).

Figure 2 – The diagnostic policy tool for locally-suited development strategies and its five keystones



Source: Authors' elaboration

Local innovative activities are the engines of regional economic performance. In quantitative terms they work as inputs in the Knowledge Production Function for the generation of new ideas later translated into economic growth. However, from a qualitative perspective, innovative activities can be pursued in different contexts – as discussed in Crescenzi et al. 2007 when comparing Europe and the US – with different roles being played by private firms, research centres, and universities. The impact of innovative activities crucially depends upon two other factors: socio economic conditions and geography. The concept of 'Social filter' (Rodríguez-Pose, 1999) – the structural socio-economic pre-conditions for the development of a well-functioning Regional System of Innovation – can be adopted as a quantitative proxy for the presence/absence of innovation prone or innovation averse local institutions, making inter-regional and inter-temporal comparisons and benchmarking possible. However, bottom-up, the assessment of the 'social filter' can be complemented using qualitative considerations capturing its institutional and

relational underpinnings (Iammarino 2005). In Figure 2, the arrows show the functional links between the various components of our diagnostic framework. The social filter is assessed in relation to innovation as it shapes the translation of innovative efforts into economically-viable knowledge and economic growth. The same reasoning applies to geography. Exposure to knowledge spillovers is an important predictor for the economic success of a region. Two mechanisms are crucial in promoting this interaction: highly localised intra-regional contacts (density) and inter-regional connections (accessibility) (Crescenzi 2005). But the generation of spillovers is also a dynamic (often qualitative) process. Changes in density are influenced by the qualitative features of the underlying inflows of productive factors. For example, the attraction and agglomeration of highly skilled individuals has different implications for local economic performance when compared to the sedimentation of low-skilled individuals. Similarly, the impact of improvements in regional accessibility resulting from transport infrastructure investments is heavily influenced not only by other local characteristics (i.e. other keystones in Figure 2), but also by the qualitative features of specific infrastructure projects. Micro-analyses have emphasized how insufficient accessibility may not only be the result of 'physical' barriers or lack of infrastructure, but also of bottlenecks or network failures that can only be identified by means of a qualitative assessment of the constraints to local accessibility. Geography – as suggested by the arrows in Figure 2 – is directly linked to innovative activities and socio-economic conditions in shaping innovation and growth performance. Accessibility to innovative spaces determines the potential exposure to knowledge spillovers and facilitates their absorption (Rodríguez-Pose and Crescenzi 2008).

Innovation and growth dynamics are, however, not only influenced by physical accessibility: the position of each region in the 'global networks' structure and its exposure to knowledge flows is also important for the diagnosis of local conditions. The capability of local actors to develop organisational, institutional, and social proximity relations with other agents determines the

position of the local economy in global networks (Boschma 2005). The 'degree of centrality' of each region in these networks can be assessed in quantitative terms (e.g. by looking at patent citations or FDI flows), but the design of bottom-up policies also requires a qualitative case-by-case understanding of the nature of non-local links and of their supportive forces. Participation in global networks exerts an influence on all of the developmental 'keystones' mentioned above. Global nodes/actors (e.g. Multinational Firms) located in the regions will benefit from and contribute to the Regional System of Innovation and, more generally, to the socio-institutional environment in their search for untradeable assets (Cantwell and Iammarino 2003). Spillovers will take place between local and global actors channelling 'global' knowledge into the local environment and 'pumping' the results of local innovative efforts into global knowledge pipelines (Bathelt et al. 2004; Coe and Bunnell 2003). Geographical accessibility is also a catalyst for the localisation of global networks given that good accessibility attracts the location of these 'nodes' by reinforcing exposure to internal localised spillovers generated by indigenous activities with the accessibility to extra-regional knowledge flows.

Finally, any top-down or bottom-up assessment of a regional economy is incomplete without considering (pre)existing development policies which, initiated and implemented at different levels (from national policies to community-level initiatives), impact upon the local economy (Pike et al., 2007). These policies can be targeted towards one or more of the 'keystones' of local economic development: policies at all levels can address 'systemic' social filter conditions, incentivize/support R&D activities or try to increase the 'centrality' of the region in geographical (e.g. by means of improvements in transport infrastructure) or social/organisational/institutional terms (e.g. by promoting international cooperation among firms and/or universities or by means of incentives for the location of Multinational Firms or other 'global' actors).

The simultaneous and reciprocal interaction of these five factors (Figure 2) determines how regions produce innovation and grow. When these interactions are synergetic (i.e. all drivers of local economic development work in the same direction), the growth potential of the local economy is maximised. Good economic performance is also possible when some factors work in order to compensate for the weaknesses of others. Rodríguez-Pose and Crescenzi (2008) have shown that innovation can be achieved even in the presence of sub-optimal R&D efforts provided that social filter conditions and exposure to spillovers is sufficiently strong. Conversely, innovation and growth are hampered in regions where one or more of these factors are persistently weak or where they tend to check each other. This happens, for example, when physical accessibility is increased without a prior reinforcement of internal socio-economic conditions, leaving the local economy exposed to external competition without fully developing its indigenous potential. Good governance and well-functioning institutions allow synergies to prevail 'endogenously'. However, local and regional development policies can certainly help the establishment of balanced development patterns where this is not the case.

If these five factors are analysed using quantitative methods, they may serve as targets for top-down policies by allowing inter-regional comparisons (e.g. for opportunity/cost assessment in the use of available resources) and a clear pinpointing of policy targets. Conversely, when the factors in Figure 2 are approached using qualitative techniques, they work as diagnostic tools for local economic conditions and as drivers for bottom-up policies. In this perspective the 'integrated framework' becomes a common ground for both top-down and bottom-up policy actions that makes their coordination easier. Bottom-up and top-down policies are governed by different political processes and collective action dynamics involving a different balance between efficiency and equity issues: while top-down regional policies have been traditionally concerned with a mixture of aggregate efficiency and territorial equity, bottom-up approaches have been essentially concerned with local efficiency. However, increasing constraints in terms of public finance have

emphasized efficiency considerations in top-down policies while increasing interconnectedness between local areas (and their communities) has favoured local actors' awareness of the impact of external conditions on local performance, making coordination between different policy actions and the reconciliation of top-down and bottom-up development policies increasingly relevant and necessary.

Applicability of the approach

Would such an approach work in all geographical contexts? The majority of the theoretical and empirical literature that forms the foundations of our integrated framework has been developed with reference to countries, regions, and territories in the 'developed' world. As a consequence the answer to the question 'What can we learn for developing countries?' remains largely unexplored. Even if increasingly popular in the developing world (Nel 2001), it is in Europe and the United States that local and regional development policy tools have been applied for a sufficiently long period of time and with enough quantitative and qualitative information to allow a consistent assessment of their effects and potential drawbacks. As a consequence, the abandonment of a 'best practice'/case study approach and developing sound conceptual framework for the analysis of regional and local innovation and growth dynamics, provides us with the necessary (though not sufficient) conceptual tools to understand what of the 'developed world' policy experience can be successfully transferred into 'developing' and emerging economies (and under what conditions). The re-design and re-conceptualisation of the framework presented here, in line with the specific features of emerging economies, is in our agenda for future research together with the necessary validation by means of quantitative empirical analysis. We share Scott and Storper's (2003) view that: 'as globalization and international economic integration have moved forward, older conceptions of the broad structure of world economic geography as comprising separate blocs (First, Second and Third Worlds), each with its own developmental dynamic, appear to be giving way to another vision. This alternative perspective seeks to build a common theoretical language

about the development of regions and countries in all parts of the world, as well as about the broad architecture of the emerging world system of production and exchange . . . it recognizes that territories are arrayed at different points along a vast spectrum of developmental characteristics.'(p.582). In this perspective we are convinced that a pragmatic and eclectic use of both theory and evidence (à la Rodrik) within the integrated framework presented here will provide us with useful directions for locally-tailored policy transfer.

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